

# NON-BLOCKING MECHANICAL FIBER OPTIC MATRIX SWITCH

2

## ABSTRACT OF THE DISCLOSURE

4           A first plurality of stages each support a ferrule surrounding an end portion of a  
corresponding one of N optical input fibers. A second plurality of stages each support a ferrule  
6           surrounding an end portion of a corresponding one of M optical output fibers. Mechanical  
mechanisms translate the stages along a plurality of orthogonal X and Y axes to align a facet of  
8           a selected one of the N input optical fibers with a facet of a selected one of the M output optical  
fibers. The stages of the input optical fibers, the output optical fibers, or both, have mechanical  
mechanisms for moving the ferrules along Z axes perpendicular to the X and Y axes into and out  
of alignment holes of a central panel to physically mate the facets of the coupled fibers.

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